Claims

1. An anastomosis device, comprising:

a first plurality of arcuate members arranged in a first position in a cylindrical crown shape with each arcuate member having legs overlapping at least one adjacent arcuate member; and

a second plurality of arcuate members arranged in a first position in an inverted cylindrical crown shape with each arcuate member having legs overlapping at least one adjacent arcuate member of the second plurality and connected to a leg of an arcuate member of the first plurality;

wherein the woven tube thus formed is operably configured to transform into a second position comprising a hollow rivet shape with each arcuate member outwardly deflected from a longitudinal axis of its respective cylindrical crown toward apposing arcuate members of the other cylindrical crown.

2. The anastomosis device of claim 1, wherein the arcuate members comprise a shape memory effect alloy.

3. The anastomosis device of claim 1, wherein the legs of the arcuate members of the first plurality are attached to the respective arcuate member of the second plurality by a connecting member.

4. The anastomosis device of claim 3, wherein the connecting members comprises a selected one of a group consisting of a snap fit, a glue, an ultrasonically welded portion, and a thermally melted polymer.

5. The anastomosis device of claim 3, wherein the legs of the arcuate members of the first plurality are attached to the respective arcuate member of the second plurality by a rigid connecting member, a petal formed by the first arcuate member actuating generally in a plane with the respective attached arcuate members pivoting about a cylindrical midpoint of the anastomosis device.

6. The anastomosis device of claim 5, wherein each leg is further hingedly coupled at the circular midpoint of the anastomosis device to at least one other leg.

7. The anastomosis device of claim 3, wherein the legs of the arcuate members of the first plurality are attached to the respective arcuate member of the second plurality by a pivotal connecting member.

8. The anastomosis device of claim 3, wherein the connecting member comprises a band at a midpoint of the device connected to each arcuate member.

9. An anastomosis ring device, comprising:

a means for forming a half cylindrical which actuates into a first apposing member about a midpoint at an anastomosis tissue juncture; and

a means for forming an inverted half cylinder which actuates into a second apposing member at the midpoint at the anastomosis tissue juncture.

10. An anastomosis ring device, comprising a plurality of arcuate members operably configured to be arranged into two crowns attached to one another to present petal circumferentially hinged at a circular midpoint, each arcuate member comprising a pair of diverging connected legs.

11. The anastomosis ring device of claim 10, wherein each arcuate member further comprises:

a first end having a pin receiving recess; and

a second end having a pivot pin;

wherein the first end of a first arcuate member pivotally connects to a second end of a second arcuate member and the second end of the first arcuate member connects to a first end of a third arcuate member.

12. The anastomosis ring device of claim 11, wherein the first, second and third arcuate members reside within the same crown, the first and second ends of each arcuate member rigidly connected to a respective first and second end of a fourth and fifth inverted arcuate member of the crown.

13. The anastomosis ring device of claim 12, wherein the first and second ends are aligned parallel to one another and perpendicularly oriented with respect to a plane formed by the diverging connection of the two legs.

The applier of claim 1, wherein the actuating member is engaged to the distal ring.